

ABSTRACT

The invention increases the sensitivity of end point detection in charged particle beam processing by using the blanking frequency of the charged particle beam as a reference frequency. The modulating frequency of the charged particle beam can be readily detected in a detected signal by using the reference frequency in a frequency sensitive circuit, such as a lock in amplifier. A change in the modulating frequency in the detected signal indicates that the beam is impinging on a change in the material in the work piece, so an operation to mill through an insulating layer to expose the conductor, or operation to mill through a conductor, is halted.